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Wyoming RIK Pilot Program Bid Evaluation for bids due August 7th, 1998

Fundamental to the process of bidding royalty-in-kind production at the lease is the assessment of the adequacy of the bids received. For the Federal government, the process of assessing bids is intended to protect the royalty revenue stream. The pilot program strives to be revenue neutral relative to the traditional in-value royalties. By not accepting bids that are lower than what we expect to receive through in-value royalties we provide assurance that the pilot will not result in lost revenue for the State and Federal government.

Bid evaluation for Phase 1 of the Wyoming RIK pilot program is straightforward. We will essentially compare the bid to the effective price we have received in royalties in the past. The bid and the past royalty price received will both be relative to a common index. Wyoming Sweet crudes will be assessed relative to NYMEX. Wyoming sour and sour asphaltic crudes will be assessed relative to an index created from the average of 4 crude posted prices as cited in the Invitation for Bid (IFB). The difference between the royalty price received and the index is our "delta". This delta, or a forecast of this delta for the bid period, will form the basis for the minimum acceptable bid (MAB). Our analysis of royalty prices received in Wyoming shows that they are highly correlated with NYMEX, local posted prices, and the regional (PAD 4) refiner's acquisition cost of crude (RAQ), as reported by the US Dept. of Energy.

In its most basic form, we can use the royalty price received over the last 6 months relative to the relevant index to assess the adequacy of bids received. In forecasting terminology, this would be the "naïve" forecast. That is, using the current period as the forecast for the next period. In terms of this pilot, if we received \$0.45 under NYMEX for Wyoming Sweet crude for a specific lease for the last 6 months, we would expect to receive approximately the same amount over the next 6 months. The naïve forecast is an unbiased, reasonable and defensible forecast, and can be the best possible depending on information available. It can be difficult to beat the naïve forecast for many economic variables. Persistency and consistency in the economy suggest that we will do about as well in the current period as the last period. This is true for many macroeconomic variables. Restated, business carries on as it has before. Changes occur gradually over time, particularly if the nature of competition in the market does not change. In the oil market, while the overall price of crude may change rapidly, the price of one crude relative to another, as represented by our delta, will be much more stable.

Examining the data, we hoped to find an econometric relationship for the delta with other economic variables that would logically affect the delta. With this relationship we would be able to improve on the naive forecast and get a better picture (expectation) of what the delta would be in the next period. The data show that the delta for many

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leases does seem to move around from month to month. The observation that the delta is not constant suggests that it is determined by more than some fixed transportation charge and quality adjustment. It is sometimes more and sometimes less than these costs alone, would indicate. The econometric relationship we seek would explain this movement in the delta. The economic variables that could rationally be expected to influence the movement of the delta would include: the average refiners acquisition costs (RAQ), volume of crude oil imported into the area (Pad 4), volume of crude oil exported from the area, and the amount of products produced from crude oil in the area. Looking at these factors, our statistical analysis could not determine at this time, a statistically significant relationship with delta over the last 5 years. This is an interesting result on its own. It says that the difference between the monthly local posted price or spot price and the prices MMS receives in royalties seems to be somewhat random. This is contrary to our expectations. Specifically, it potentially exhibits signs of market power concentration and incomplete or asymmetrical information among market participants. Other evidence in the market suggest that: 1) these conditions do exist in Wyoming; and 2) that the monthly receipts for crude sold from the lease are not necessarily based on local spot/posted prices for that month. The crude could be sold on longer term fixed price contract, sold through call provisions, or other marketing/pricing mechanisms, and the producer/operator may exhibit hedging/speculative behavior. Further examination of the deltas for each type of crude offered in the Wyoming Pilot reveals that the deltas across properties tend to move upwards and downwards together. Clearly there is something of all these factors involved in the Wyoming market, and they limit our ability to build a sophisticated assessment model.

In lieu of this model, we have estimated delta a few different ways. One of these is a variation on the naïve forecast, described above, to account for seasonal fluctuations. This is especially critical for crudes that exhibit significant seasonal variation. The asphaltic crudes fall into this category. Our criteria here need to match the forecast month with the same month in the past. For the less seasonal general sour and sweet crudes, based on our analysis, the average of the deltas over the most recent 6 month period for which data are available is an effective and unbiased forecast of the delta, and will form the basis of minimum acceptable bids in the bid table.

The estimates of deltas, identified as the "Minimum Acceptable Bid" (MAB) are displayed in a "Table of Wyoming Crude Oil Packages and Properties Offered for Bid (Bid Table). A number of properties have multiple payors, each of which reports a different royalty price. For the purposes of bid adequacy, we will assume that the higher of the prices reported by the payors is more reflective of market value, and will form the basis for the minimum acceptable bid for that property. The prices reported by individual payors are shown in the bid table. For properties with only one payor, a safety factor of 5%, to account for some inherent uncertainty in the data, will be applied to result in MAB's (deltas) in the table that ensure the pilot does not lose revenues.

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Bid adequacy for the three large packages of sweet, sour, or asphaltic sour crudes will be assessed relative to the bidding for each of the individual leases. If the bid for the package is in excess of the sum of the winning bids for in-kind leases and estimated in-value receipts for leases where all bids were rejected in the package, then the bid for the package will be accepted. If the package bid is lower than this sum of receipts for the individual lease, then it will be rejected.

The bid evaluation process will also consider administrative savings. Certain combinations of winning bids may be easier to administrate. Generally speaking a smaller number of purchasers with winning bids would be preferable. However, the potential administrative savings are small, and the potential savings are dependent on the range and prices of the bids actually received. It is difficult, therefore, to provide definitive guidelines for the consideration of administrative costs, in advance of the bid opening. Any decision to accept or reject bids based in part on administrative factors will be documented.

Clearly, regardless of our modeling success or the effectiveness of our bid assessment, we will never know in advance the adequacy of any bid until after the time period for which the bid applies is over. Only then can we compare the bid to what we have actually received from 1) similar leases in the same area (including State leases) if the bid was accepted, or 2) from the same lease for which the bid was made, if the bid was rejected. It is this *ex post* assessment, after all the actual numbers are in, that will determine the success of the pilot. The number of bids we accept or do not accept in the bid evaluation process will not determine the success of the pilot. By using our ability to choose which leases we want to take in-kind, and our right to reject bids we can protect our revenue stream. This is the only intent of the bid assessment.

Our evaluation of lease receipts will continue over the course of the pilot as we seek to continually improve our assessment ability and our understanding of the market. The bids themselves will contribute to that understanding. Areas for continued work include an analysis of the relative volatility of lease receipts vs. the index prices, the derivation of long-run deltas for each lease, a cross property and time series to examine the relationship of delta's across leases, as well as further work to describe the effect of market forces on lease receipts

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Powder River Basin – Sweet Crude

12-97
to
5-98
6-mo.

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Line Code	Unit or Field Name	Operator	Federal Lease Agre. No.	Federal Average Royalty bbls/day	avg	MAB
1 PSW0600	Cody Draw	General Oil Co.	0491082900	3.3		
2 PSW2300	Seedy Draw	Townsend Co. Inc.	0490676550	0.1		
3 PSW0403	Boggy Creek	Western Production Co.	6910005580	0.04		
4 PSW0400	Boggy Creek	Jims Water Service	048220694C	0.2		
5 PSW0404	Boggy Creek	Powder River Petroleum	048316841A	0.7		
6 PSW0401	Boggy Creek	Jims Water Service	0491261920	0.1		
7 PSW0402	Boggy Creek	Klabzuba Operating Co.	0490550120	0.1		
8 PSW2400	Snyder Creek	L&J Operating	0491219920	0.1		
9 PSW2401	Snyder Creek	L&J Operating	0640765630	0.1		
10 PSW1801	Jiggs Thompson	Farnsworth & Kaiser	0490321570	0.2		
11 PSW1900	North Buck Draw	Devon	W 106652X	140.2		
11 PSW1900	North Buck Draw	Devon	W 106652X			
12 PSW1604	House Creek South	Independent Prod. Co.	6970010450	0.2		
13 PSW1602	House Creek (Sus)	M&K Oil	0500299410	0.2		
14 PSW1603	House Creek (Tur)	M&K Oil	6910006120	0.01		
15 PSW1600	House Creek	M&K Oil	6910006170	0.05		
16 PSW1601	House Creek	Devon	84687U9690	100.3		
17 PSW1300	Hartzog Draw	Exxon	8910194240	518.1		
17 PSW1300	Hartzog Draw	Exxon	8910194240			
18 PSW2700	Table Mountain	TBI Exploration	W 125236X	26.0		
19 PSW1608	House Creek North	UMC Petroleum	W 114211X	20.9		
20 PSW0700	Culp Draw	TBI Exploration	8910210760	99.0		
21 PSW1401	Heldt Draw "A"	TBI Exploration	8910137460	8.6		
22 PSW1402	Heldt Draw "B"	TBI Exploration	891013746D	4.1		
23 PSW1605	House Creek West	Flying J O&G	0483254870	0.5		
24 PSW1607	House Creek West	Flying J O&G	0490391800	1.3		
25 PSW1606	House Creek West	Flying J O&G	0490374970	1.8		
26 PSW2802	Triangle	Citation O&G	0491277940	4.2		
27 PSW2801	Triangle	Citation O&G	0491266210	1.3		
28 PSW2900	Triangle	Citation O&G	8910181480	19.5		
29 PSW2800	Triangle	North Finn	0490809710	0.2		
30 PSW1700	Iberlin	Northern Production	0483114020	0.6		
31 PSW0703	Culp Draw	TBI Exploration	0490898560	0.9		
32 PSW0702	Culp Draw	TBI Exploration	0490898480	2.8		
33 PSW0701.4	Culp Draw	JN E&P	10482666380	0.9		

Table of Wyoming Crude Oil Packages and Properties Offered for Bid
Powder River Basin -- Sweet Crude

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Line Code	Unit or Field Name	Operator	Federal Lease Agre. No.	Federal Royalty bbls/day	12-97 to 5-98 6-mo. avg MAB
34 PSW2101	Pleasant Dale	Aexco Petroleum	6910003610	0.3	"X-4" "X-4"
35 PSW2102	Pleasant Dale	Aexco Petroleum	0483154700	0.3	"X-5" "X-5"
36 PSW1200	Gardner Draw	Central Resources	W 135370	0.5	
37 PSW1201	Gaitne Draw	Ballard Petroleum	0491295230	1.4	
38 PSW2501	South Deadhorse	Northern Production	0480415220	0.7	
39 PSW2500	South Deadhorse	Northern Production	048040581D	0.2	
40 PSW2502	South Deadhorse	Northern Production	048041522A	0.3	
41 PSW2601	SW Deadhorse	Rim Operating	0490664090	4.1	
42 PSW2600	SW Deadhorse	Stellar Oil	0490357580	4.3	
43 PSW1002	Empire	Berenergy Corp.	0483013790	0.7	
44 PSW1003	Empire	Berenergy Corp.	0490291680	0.4	
45 PSW1004	Empire	Flying J O&G	0490322670	0.5	
46 PSW1006	Empire	Kaiser-Francis	0490352160	2.1	
47 PSW1005	Empire	Berenergy Corp.	049032267B	3.7	
48 PSW1101	Empire/Berlin	Prospective Investments	0490589440	2.6	
49 PSW1100	Empire/Berlin	Prospective Investments	6910006500	1.2	
50 PSW1102,3	Empire/Berlin	Davey Corp.	0490715460	1.6	
51 PSW2200	Pumpkin Creek	Aztec Gas & Oil	W 136880	0.3	
52 PSW2000	Phoenix	JN E&P	0490302530	0.9	
53 PSW0900	Doe	Energy Operating	W 124661X	2.2	
54 PSW0202	21 Mile Butte	True Oil	0491306000	3.4	
55 PSW0201	21 Mile Butte	True Oil	0490913800	5.8	
56 PSW0301	Black Rock Draw	Northern Production	0490464500	1.0	
57 PSW0504	Bridge Draw	Bluebonnet Energy	6910003360	1.7	
58 PSW0509	Bridge Draw	UMC Petroleum	0490703640	0.9	
59 PSW0500	Bridge Draw	UMC Petroleum	6910002020	0.8	
60 PSW0501	Bridge Draw	UMC Petroleum	6910002580	1.1	
61 PSW0506	Bridge Draw	Marlin Oil Co.	0490434090	0.2	
62 PSW0505	Bridge Draw	Wellstar Corp.	7810000170	2.5	
63 PSW0508	Bridge Draw	Wellstar Corp.	0490608680	2.0	
64 PSW0502	Bridge Draw	UMC Petroleum	6910002860	0.5	
65 PSW0507	Bridge Draw	Northern Production	0490457230	1.8	
66 PSW0800	Dead Horse Creek	Updike Resources	8910085120	0.2	
67 PSW3000	Wildcat	Independent Prod. Co.	0491290400	0.3	
				1,007.2	

Table of Wyoming Crude Oil Packages and Properties Offered for Bid
Powder River Basin – General Sour Crude

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Unit or Line Code	Field Name	Operator	Federal Agre. No.	Federal Average Royalty bbis/day	12-97 to 5-98 6-mo. avg MAB
1 PSR0902	Cellers Ranch	Hunt Oil	0491020610	6.3	"X - 4" "X - 4"
2 PSR0900	Cellers Ranch	Hunt Oil	W 119864	4.2	"X - 5" "X - 5"
3 PSR0901	Cellers Ranch	Citation O&G	048000436A	17.5	
4 PSR0903	Cellers Ranch	Hunt Oil	0491063340	5.7	
5 PSR1100	Dead Horse	Prima Exploration	049056585A	3.3	
6 PSR4400	South Robinson	Costilla Energy	0481799300	2.5	
7 PSR3700	Winter Draw	UMC Petroleum	W 115064X	80.6	
8 PSR2600	N. Rainbow Ranch	Citation O&G	8910210630	6.5	
9 PSR1400	Dry Gulch	Duncan Oil	W 109088X	40.7	
10 PSR2000	Mallard	Eland Energy	W 132734X	22.7	
11 PSR6200	Robinson Ranch East	White River Corporation	8910079300	0.3	
12 PSR5400	Robinson Ranch	Ranch Oil Co.	891007920A	0.1	
13 PSR3400	Superhornet	Ballard Petroleum	W 125262X	19.5	
14 PSR1500	Falcon Ridge	TBI Exploration	W 115054X	7.2	
15 PSR2500	Prong Creek West	Ballard Petroleum	W 119861X	27.1	
16 PSR0400	Alpha	Swift Energy	W 115090X	22.3	
17 PSR3200	South Wallace	TBI Exploration	W 129795X	35.7	
18 PSR1800	Indian Tree	Hunt Oil	W 123878X	43.9	
19 PSR5600	Trava	Essex Energy Inc.	W 121875X	0.5	
20 PSR4100	Ammo	Atasca Resources Inc.	W 109079X	0.9	
21 PSR3800	Wolf Draw	UMC Petroleum	W 115093X	35.6	
22 PSR4900	Semlek North	Hunt Oil	W 106639X	6.6	
23 PSR4800	Semlek West	Hunt Oil	4940000520	4.9	
24 PSR4801	Semlek West	Hunt Oil	4940000820	5.4	
25 PSR4802	Semlek West	Hunt Oil	891012478A	3.5	
26 PSR5800	American	Aexco Petroleum	84688U9270	3.1	
27 PSR5200	Heath	Kaiser-Francis	0490663860	6.4	
28 PSR5100	Mellott Ranch	Kaiser-Francis	0490630220	1.5	
29 PSR1952	Little Mitchell Creek	True Oil	0480421870	3.5	
30 PSR1950	Little Mitchell Creek	Osborn Heirs	8910086440	30.2	
31 PSR1951	Little Mitchell Creek	Osborn Heirs	0480193090	8.4	
32 PSR0600	Bracken	Plains Petroleum	84686U9210	23.7	
33 PSR0601	Bracken	JN E&P	0490270420	10.3	

Table of Wyoming Crude Oil Packages and Properties Offered for Bid
Powder River Basin – General Sour Crude

12-97
Federal
Average
Royalty
bbls/day
to
5-98
6-mo.
avg
MAB

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Unit or Line Code	Field Name	Operator	Federal Agre. No.	" X-4 " Y-4 " " X-5 " Y-5 "
34	PSR1600	Gibbs	True Oil	W 106645X 14.6
35	PSR2300	North Breaks	Fancher Oil	W 119637X 34.2
36	PSR0500	Ash	Fancher Oil	W 125237X 16.5
37	PSR1200	Deep Draw-Breaks	Fancher Oil	0491219650 3.4
38	PSR1700	Hilda	Lario O&G	W 133833 3.8
39	PSR0300	Allison	Central Resources	0490683250 1.4
40	PSR2200	North Adon Road	Plains Petroleum	W 130885X 22.8
41	PSR0200	Adon Road	JN E&P	W 132741X 4.1
42	PSR3600	North Wallace	Ballard Petroleum	0491110520 4.1
43	PSR2100	North Wallace	Pendragon Energy	0491223410 4.4
44	PSR0700	Cambridge	Plains Petroleum	W 125233X 55.8
45	PSR5000	Mural Huber	JN E&P	0490663870 3.2
46	PSR0800	Candy Draw	Costilla Energy	84687U9500 44.6
47	PSR2400	Pownall Ranch	Hunt Oil	8910209840 37.3
48	PSR3000	S. Pownall Ranch	Hunt Oil	W 130891X 8.0
49	PSR1300	Deer Fly South	Lario O&G	W 136878X 8.3
50	PSR2900	Sagebrush	Lario O&G	W 140441 13.7
51	PSR2950	Shippy	Brown Operating	0490554070 10.5
52	PSR2951	Shippy	Brown Operating	0490927770 3.3
53	PSR1900	Jackelope	Brown Operating	W 118942 0.4
54	PSR0100	Adon North	C&H Well Service	0491011010 1.2
55	PSR4300	Spirit	Citation O&G	W 121873X 6.1
56	PSR3100	Soda Wells	Fancher Oil	0491289910 8.3
57	PSR3300	Straag Draw	Ballard Petroleum	W 126543X 0.1
58	PSR0750	Camp Creek	H.D. Adams	048046410E 12.6
59	PSR3500	Victor	Ballard Petroleum	84688U9910 19.1
60	PSR3501	Victor	Ballard Petroleum	0490841610 0.2
61	PSR1000	Cullums	Pendragon Energy	0483113880 10.7
62	PSR2700	Calamity Springs	Yates Petroleum	W 127626X 22.6
63	PSR2800	Rocky Point	Camwest Ltd.	0483247030 23.9
Bid for All 63				890.0

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Big Horn Basin – Asphaltic Sour Crude

No.	Line Code	Unit or Field Name	Operator	Federal Lease Agre. No.	Federal Average Royalty bbls/day	10-97 to 3-98 6-mo. avd MAB
1	B0101	Black Mountain	Texaco	0620393210	0.7	"X-4" "X-4"
2	B0100	Black Mountain	Texaco	892000435A	57.1	"X-5" "X-5"
3	B0600	Gebo	Marathon	8920003630	117.5	
4	B0200	Davis	Marathon	0640689070	1.4	
5	B2400	Waugh Dome	Manx Oil	0483142750	0.4	
6	B0802	Hamilton Dome	Merit Energy	0490376990	2.2	
7	B0801	Hamilton Dome	Merit Energy	0490376970	0.1	
8	B0800	Hamilton Dome	Merit Energy	W 138681X	551.5	
9	B2300	Wagonhound	Boelens Well Service	0640659970	0.6	
10	B3301	Neiber Dome	Intoil Inc.	0491376950	1.2	
11	B3303	Neiber Dome	KCS Mtn. Resources	0490566630	0.4	
12	B3302	Neiber Dome	Intoil Inc.	0480000060	1.2	
13	B3200	Neiber Dome	Timberline Production	0490188080	0.8	
14	B1905	Slick Creek	Washakie Energies Co.	0490082430	0.2	
15	B1902	Slick Creek	Washakie Energies Co.	0490512690	0.5	
16	B2800	South Fork	Western Production Co.	8920005280	3.8	
17	B2801	South Fork	Markus Production	0490499370	0.6	
18	B0700	Grass Creek (Curtis)	Marathon	891006062A	7.8	
19	B0701	Grass Creek (Phos.)	Marathon	8910142000	27.8	
20	B1101	Little Buffalo	Citation O&G	892000365A	0.2	
21	B1100	Little Buffalo	Citation O&G	892000365C	55.8	
22	B1102	Little Buffalo	Citation O&G	892000365D	99.6	
23	B1104	Little Buffalo	Citation O&G	892000365F	0.2	
24	B1103	Little Buffalo	Citation O&G	892000365E	46.8	
25	B1600	North Sunshine	Marathon	0640794300	13.9	
26	B2505	Rattlesnake	Hanson Operating Co.	0490444610	6.0	
27	B2506	Rattlesnake	Hanson Operating Co.	0490358760	0.2	
28	B2507	Rattlesnake	Hanson Operating Co.	0490444600	0.3	
29	B2501	Rattlesnake	Continental Resources	048254904A	0.5	
30	B2502	Rattlesnake	Bass Enterprises	0483140258	0.2	
31	B2503	Rattlesnake	Bass Enterprises	0481876460	0.1	
32	B2508	Rattlesnake	Hanson Operating Co.	0490334410	1.6	
33	B1500	N. Rattlesnake	Samson Resources	049002607A	2.4	
34	B2007	South Frisby	Herbaly Petroleum	0490442550	0.4	
35	B2002	South Frisby	Bass Enterprises	0490117730	0.1	
36	B2006	South Frisby	Carol Holly Oil	0490745360	0.4	
37	B2003	South Frisby	Carol Holly Oil	0490117740	0.3	
38	B2004	South Frisby	Carol Holly Oil	0490595070	2.0	

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Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Big Horn Basin – Asphaltic Sour Crude

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No.	Line Code	Unit or Field Name	Operator	Federal Lease Agre. No.	Federal Average Royalty bbls/day	10-97 to 3-98 6-mo. avg MAB
39	B1900,3,4	Slick Creek	Carol Holly Oil	Herbaly 0490323650	2.0	"X-4" "X-4" "X-5" "X-5"
40	B1700	Pitch Fork	Marathon	18920001130	303.4	
41	B0400	Four Bear	Goldmark Engineering	18920001610	3.5	
42	B0300	Enigma (Tensleep)	Citation O&G	W 112017X	63.2	
43	B2100	South Spring Creek	Texaco	1892000279A	43.3	
44	B3102	Byron (Mad "A")	Marathon	1891002436B	0.7	
45	B3101	Byron (Em-Ten)	Marathon	1891012527A	47.0	
46	B1003	Kinney Coastal	Marathon	1892000185E	2.6	
47	B1000	Kinney Coastal	Marathon	1892000185A	6.7	
48	B1002	Kinney Coastal	Marathon	1892000185C	42.1	
49	B1004	Kinney Coastal	Marathon	10640446940	0.2	
50	B1005	Kinney Coastal	Marathon	10640447690	1.1	
51	B1001	Kinney Coastal	Marathon	1892000185B	6.9	
52	B0500	Garland (Em-Tn-Md)	Marathon	1892000174A	242.3	
53	B0900	Harriman	Energy Operating	064043979A	4.9	
54	B1800	Sage Creek	Phoenix Production	18920005340	1.2	
55	B1801	Sage Creek	Schneider Oil	049057045A	1.0	
56	B1201	Little Polecat	Kirkwood O&G	0490492700	0.6	
					1,781.8	

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Powder River Basin -- General Sour Crude

Line Code	Unit or Field Name	Federal Agre. No.	Calc for MAB for all prop.	Federal Royalty bbls/day	Average 6-mo. avg	5-98 MAB	12-97				Bidders	High Bid Over (Under)	High Bid Daily Royl Bbts	Accepted High bid times Daily Royl bbls	6-month revenue gain using bid diff.
							West Gas	True	EOTT	Conoco					
PSR0902	Cellers Ranch	0491020610	\$ X-4 "	6.3	X-4	X-4					X-4	X-4	6.3	\$ X-4	\$ X-4
PSR0900	Cellers Ranch	W 119864	\$ X-5 "	4.2	X-5	X-5					X-5	X-5	4.2	\$ X-5	\$ X-5
PSR0901	Cellers Ranch	048000436A	\$	17.5									17.5	\$	
PSR0903	Cellers Ranch	0491063340	\$	5.7									5.7	\$	
PSR1100	Dead Horse	049056585A	\$	3.3										<-- inadequate bids	
PSR4400	South Robinson	0481799300	\$	2.5									2.5	\$	
PSR3700	Winter Draw	W 115064X	\$	80.6									80.6	\$	
PSR2600	N. Rainbow Ranch	8910210630	\$	6.5									6.5	\$	
PSR1400	Dry Gulch	W 109088X	\$	40.7									40.7	\$	
PSR2000	Mallard	W 132734X	\$	22.7									22.7	\$	
PSR6200	Robinson Ranch East	8910079300	\$	0.3										<-- inadequate bids	
PSR5400	Robinson Ranch	891007920A	\$	0.1										<-- inadequate bids	
PSR3400	Superhornet	W 125262X	\$	19.5									19.5	\$	
PSR1500	Falcon Ridge	W 115054X	\$	7.2									7.2	\$	
PSR2500	Prong Creek West	W 119861X	\$	27.1										<-- inadequate bids	
PSR0400	Alpha	W 115090X	\$	22.3									22.3	\$	
PSR3200	South Wallace	W 129795X	\$	35.7									35.7	\$	
PSR1800	Indian Tree	W 123878X	\$	43.9									43.9	\$	
PSR5600	Trava	W 121875X	\$	0.5										<-- inadequate bids	
PSR4100	Ammo	W 109079X	\$	0.9										<-- inadequate bids	
PSR3800	Wolf Draw	W 115093X	\$	35.6									35.6	\$	
PSR4900	Semieck North	W 106639X	\$	6.6										<-- inadequate bids	

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Powder River Basin -- General Sour Crude

Line Code	Unit or Field Name	Federal Agree. No.	Calc for MAB for all prop.	12-97				West Gas	True	EOTT	Bidders	Trans Conoco Canada	High Bid MAB	Over (Under) MAB	High Royl Bbls	Accepted Daily Royl bbls	High bid times Daily Royl bbls	6-month revenue gain using bid diff. over MAB
				Federal Royalty	Average bbls/day	5-mo. avg	MAB											
PSR4800	Semlek West	4940000520	\$ X-4		4.9	X-4	X-4							X-4	4.9	\$ X-4	\$ X-4	
PSR4801	Semlek West	4940000820	\$ X-5		5.4	X-5	X-5							X-5	5.4	\$ X-5	\$ X-5	
PSR4802	Semlek West	891012476A	\$		3.5													
PSR5800	American	84688U9270	\$		3.1											3.1	\$	\$
PSR5200	Heath	0490663860	\$		6.4											6.4	\$	\$
PSR5100	Mellott Ranch	0490630220	\$		1.5											1.5	\$	\$
PSR1952	Little Mitchell Creek	0480421870	\$		3.5											3.5	\$	\$
PSR1950	Little Mitchell Creek	8910086440	\$		30.2											30.2	\$	\$
PSR1951	Little Mitchell Creek	0480193090	\$		8.4											8.4	\$	\$
PSR0600	Bracken	84686U9210	\$		23.7											<- inadequate		
PSR0601	Bracken	0490270420	\$		10.3											10.3	\$	
PSR1600	Gibbs	W 106645X	\$		14.6											14.6	\$	\$
PSR2300	North Breaks	W 119637X	\$		34.2											34.2	\$	\$
PSR0500	Ash	W 125237X	\$		16.5											16.5	\$	\$
PSR1200	Deep Draw-Breaks	0491219650	\$		3.4											3.4	\$	\$
PSR1700	Hilda	W 133833	\$		3.8											3.8	\$	\$
PSR0300	Allison	0490683250	\$		1.4											<- inadequate bids		
PSR2200	North Adon Road	W 130885X	\$		22.8											22.8	\$	\$
PSR0200	Adon Road	W 132741X	\$		4.1											4.1	\$	\$
PSR3600	North Wallace	0491110520	\$		4.1											4.1	\$	\$
PSR2100	North Wallace	0491223410	\$		4.4											<- inadequate bids		
PSR0700	Cambridge	W 125233X	\$		55.8											55.8	\$	\$
PSR5000	Murial Huber	0490663870	\$		3.2											<- inadequate bids		
PSR0800	Candy Draw	84687U9500	\$		44.6											44.6	\$	\$

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Powder River Basin -- General Sour Crude

Unit or Line Code	Field Name	Federal Agre. No.	Calc for MAB for all prop.	Federal Average Royalty bbls/day	12-97 to 5-98		West Gas	True	EOTT	Conoco	Trans Canada	High Bid Over (Under) MAB	Daily Royl Bbls	Accepted High bid times Daily Royl bbls	6-month revenue gain using bid diff. over MAB	
					6-mo. avg	MAB										
PSR2400	Pownall Ranch	8910209840	\$ X-4	37.3	X-4	X-4						X-4 X-5	X-4 X-5	37.3	\$ X-4 X-5	\$ X-4 X-5
PSR3000	S. Pownall Ranch	W 130891X	\$ X-5	8.0	X-5	X-5										<- inadequate bids
PSR1300	Deer Fly South	W 136878X	\$	8.3												8.3 \$ \$
PSR2900	Sagebrush	W 140441	\$	13.7												13.7 \$ \$
PSR2950	Shippy	0490554070	\$	10.5												10.5 \$ \$
PSR2951	Shippy	0490927770	\$	3.3												3.3 \$ \$
PSR1900	Jackelope	W 118942	\$	0.4												<- inadequate bids
PSR0100	Adon North	0491011010	\$	1.2												1.2 \$ \$
PSR4300	Spirit	W 121873X	\$	6.1												6.1 \$ \$
PSR3100	Soda Wells	0491289910	\$	8.3												8.3 \$ \$
PSR3300	Straag Draw	W 126543X	\$	0.1												<- inadequate bids
PSR0750	Camp Creek	048046410E	\$	12.6												12.6 \$ \$
PSR3500	Victor	84686U9910	\$	19.1												19.1 \$ \$
PSR3501	Victor	0490841610	\$	0.2												<- no bids
PSR1000	Cullums	0483113880	\$	10.7												10.7 \$ \$
PSR2700	Calamity Springs	W 127626X	\$	22.6												22.6 \$ \$
PSR2800	Rocky Point	0483247030	\$	23.9												<- inadequate bids
Totals			\$	890.0												785.9 \$ \$
			\$													88% \$

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Powder River Basin -- Sweet Crude

Line Code	Unit or Field Name	Federal Lease Agre. No.	Calc for MAB for all prop.	Federal Average Royalty bbls/day	12-97 to 5-98			High Bid Over (Under) MAB	Revenue loss using highest bid	
					6-mo. avg	MAB	West Gas	EOTT	Trans Canada	
PSW0600	Cody Draw	0491082900	\$ X-4	3.3	X-4	X-4				X-4 \$ X-4
PSW2300	Seedy Draw	0490676550	\$ X-5	0.1	X-5	X-5				X-5 \$ X-5
PSW0403	Boggy Creek	6910005580	\$	0.04						\$
PSW0400	Boggy Creek	048220694C	\$	0.2						\$
PSW0404	Boggy Creek	048316841A	\$	0.7						\$
PSW0401	Boggy Creek	0491261920	\$	0.1						\$
PSW0402	Boggy Creek	0490550120	\$	0.1						\$
PSW2400	Snyder Creek	0491219920	\$	0.1						\$
PSW2401	Snyder Creek	0640765630	\$	0.1						\$
PSW1801	Jiggs Thompson	0490321570	\$	0.2						\$
PSW1900	North Buck Draw	W 106652X	\$	140.2						\$
PSW1900	North Buck Draw	W 106652X	\$							\$
PSW1604	House Creek South	8970010450	\$	0.2						\$
PSW1602	House Creek (Sus)	0500299410	\$	0.2						\$
PSW1603	House Creek (Tur)	6910006120	\$	0.01						\$
PSW1600	House Creek	6910006170	\$	0.05						\$
PSW1601	House Creek	84687U9690	\$	100.3						\$
PSW1300	Hartzog Draw	8910194240	\$	518.1						\$
PSW1300	Hartzog Draw	8910194240	\$							\$
PSW2700	Table Mountain	W 125236X	\$	26.0						\$
PSW1608	House Creek North	W 114211X	\$	20.9						\$
PSW0700	Culp Draw	8910210760	\$	99.0						\$
PSW1401	Heldt Draw "A"	8910137460	\$	8.6						\$
PSW1402	Heldt Draw "B"	891013746D	\$	4.1						\$

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Powder River Basin -- Sweet Crude

Line Code	Unit or Field Name	Federal Lease Agre. No.	Calc for MAB for all prop.	Federal Average Royalty bbls/day	12-97		High Bid Over (Under) MAB	Revenue loss using highest bid
					to 5-98 6-mo. avg	MAB		
PSW1605	House Creek West	0483254870	\$ X-4	0.5	X-4	X-4	X-4	\$ X-4
PSW1607	House Creek West	0490391800	\$ X-5	1.3			X-5	\$ X-5
PSW1606	House Creek West	0490374970	\$ X-5	1.8	X-5	X-5		
PSW2802	Triangle	0491277940	\$	4.2				\$
PSW2801	Triangle	0491266210	\$	1.3				\$
PSW2900	Triangle	8910181480	\$	19.5				\$
PSW2800	Triangle	0490809710	\$	0.2				\$
PSW1700	Iberlin	0483114020	\$	0.6				\$
PSW0703	Culp Draw	0490898560	\$	0.9				\$
PSW0702	Culp Draw	0490898480	\$	2.8				\$
PSW0701.4	Culp Draw	0482666380	\$	0.9				\$
PSW2101	Pleasant Dale	6910003610	\$	0.3				\$
PSW2102	Pleasant Dale	0483154700	\$	0.3				\$
PSW1200	Gaither Draw	W 135370	\$	0.5				\$
PSW1201	Gaither Draw	0491295230	\$	1.4				\$
PSW2501	South Deadhorse	0480415220	\$	0.7				\$
PSW2500	South Deadhorse	048040581D	\$	0.2				\$
PSW2502	South Deadhorse	048041522A	\$	0.3				\$
PSW2601	SW Deadhorse	0490664090	\$	4.1				\$
PSW2600	SW Deadhorse	0490357580	\$	4.3				\$
PSW1002	Empire	0483013790	\$	0.7				\$
PSW1003	Empire	0490291680	\$	0.4				\$
PSW1004	Empire	0490322670	\$	0.5				\$
PSW1006	Empire	0490352160	\$	2.1				\$
PSW1005	Empire	049032267B	\$	3.7				\$
PSW1101	Empire/Iberlin	0490589440	\$	2.6				\$
PSW1100	Empire/Iberlin	6910006500	\$	1.2				\$
PSW1102,3	Empire/Iberlin	0490715460	\$	1.6				\$

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Powder River Basin -- Sweet Crude

Line Code	Unit or Field Name	Federal Lease Agre. No.	Calc for MAB for all prop.	Federal Royalty bbls/day	12-97		High Bid	High Over (Under) Bid MAB	Revenue loss using highest bid
					to 5-98	6-mo. avg			
PSW2200	Pumpkin Creek	W 136880	\$ X-4	0.3	X-4	X-4	X-4	X-4	\$ X-4
PSW2000	Phoenix	0490302530	\$ X-5	0.9	X-5	X-5	X-5	X-5	\$ X-5
PSW0900	Doe	W 124661X	\$	2.2					\$
PSW0202	21 Mile Butte	0491306000	\$	3.4					\$
PSW0201	21 Mile Butte	0490913800	\$	5.8					\$
PSW0301	Black Rock Draw	0490464500	\$	1.0					\$
PSW0504	Bridge Draw	6910003360	\$	1.7					\$
PSW0509	Bridge Draw	0490703640	\$	0.9					\$
PSW0500	Bridge Draw	6910002020	\$	0.8					\$
PSW0501	Bridge Draw	6910002580	\$	1.1					\$
PSW0506	Bridge Draw	0490434090	\$	0.2					\$
PSW0505	Bridge Draw	7810000170	\$	2.5					\$
PSW0508	Bridge Draw	0490608680	\$	2.0					\$
PSW0502	Bridge Draw	6910002860	\$	0.5					\$
PSW0507	Bridge Draw	0490457230	\$	1.8					\$
PSW0800	Dead Horse Creek	8910085120	\$	0.2					\$
PSW3000	Wildcat	0491290400	\$	0.3					\$
			\$	1,007.2					\$

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Big Horn Basin -- Asphaltic Sour Crude

Line Code	Unit or Field Name	Federal Lease Agre. No.	Calc for MAB for all prop.	10-97			Bidders	Trans	High Bid Over (Under) MAB	Accepted High bid Daily times Daily Royl bbls	6-month revenue gain using bid diff. over MAB
				Federal Average Royalty	to 3-98	6-mo. avg					
B0101	Black Mountain	0620393210	\$ X-4	0.7	X-4	X-4			X-4	0.7	\$ X-4
B0100	Black Mountain	892000435A	\$	57.1	X-5	X-5			X-5	57.1	\$ X-5
B0600	Gebo	8920003630	\$	117.5						117.5	\$
B0200	Davis	0640689070	\$	1.4							<-- inadequate bids
B2400	Waugh Dome	0483142750	\$	0.4						0.4	\$
B0802	Hamilton Dome	0490376990	\$	2.2						2.2	\$
B0801	Hamilton Dome	0490376970	\$	0.1						<-- inadequate bids	
B0800	Hamilton Dome	W 138881X	\$	551.5						551.5	\$
B2300	Wagonhound	0640659970	\$	0.6						0.6	\$
B3301	Neiber Dome	0491376950	\$	1.2						1.2	\$
B3303	Neiber Dome	0490566630	\$	0.4						0.4	\$
B3302	Neiber Dome	0480000060	\$	1.2						1.2	\$
B3200	Neiber Dome	0490188080	\$	0.8						0.8	\$
B1905	Slick Creek	0490082430	\$	0.2						<-- no bids	
B1902	Slick Creek	0490512690	\$	0.5						<-- no bids	
B2800	South Fork	8920005280	\$	3.8						3.8	\$
B2801	South Fork	0490499370	\$	0.6						0.6	\$
B0700	Grass Creek (Curtis)	891006062A	\$	7.8						7.8	\$
B0701	Grass Creek (Phos.)	8910142000	\$	27.8						27.8	\$
B1101	Little Buffalo	892000365A	\$	0.2						0.2	\$
B1100	Little Buffalo	892000365C	\$	55.8						55.8	\$
B1102	Little Buffalo	892000365D	\$	99.6						99.6	\$
B1104	Little Buffalo	892000365F	\$	0.2						0.2	\$
B1103	Little Buffalo	892000365E	\$	48.8						48.8	\$
B1600	North Sunshine	0640794300	\$	13.9						13.9	\$
B2505	Rattlesnake	0490444610	\$	6.0						6.0	\$

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Big Horn Basin -- Asphaltic Sour Crude

Line Code	Unit or Field Name	Federal Lease Agre. No.	Calc for MAB for all prop.	10-97			Bidders	Trans	High Bid	Over (Under) MAR	Accepted High bid times Daily Royl bbls	6-month revenue gain using bid diff. over MAB
				Federal Average Royalty	bbls/day	to 3-98						
B2506	Rattlesnake	0490358760	\$ X-4		0.2	X-4	X-4		X-4	X-5	0.2	\$ X-4
B2507	Rattlesnake	0490444600	\$ X-5		0.3	X-5	X-5		X-5	X-5	0.3	\$ X-5
B2501	Rattlesnake	048254904A	\$ X-5		0.5						0.5	\$
B2502	Rattlesnake	048314025B	\$		0.2						0.2	\$
B2503	Rattlesnake	0481876460	\$		0.1						0.1	\$
B2508	Rattlesnake	0490334410	\$		1.6						1.6	\$
B1500	N. Rattlesnake	049002607A	\$		2.4						2.4	\$
B2007	South Frisby	0490442550	\$		0.4						0.4	\$
B2002	South Frisby	0490117730	\$		0.1						0.1	\$
B2006	South Frisby	0490745360	\$		0.4						0.4	\$
B2003	South Frisby	0490117740	\$		0.3						0.3	\$
B2004	South Frisby	0490595070	\$		2.0						2.0	\$
B1900,3,4	Slick Creek	0490323650	\$		2.0						2.0	\$
B1700	Pitch Fork	8920001130	\$		303.4						303.4	\$
B0400	Four Bear	8920001610	\$		3.5						3.5	\$
B0300	Enigma (Tensleep)	W 112017X	\$		63.2						63.2	\$
B2100	South Spring Creek	892000279A	\$		43.3						<-- inadequate bids	
B3102	Byron (Mad "A")	891002438B	\$		0.7						0.7	\$
B3101	Byron (Em-Ten)	891012527A	\$		47.0						47.0	\$
B1003	Kinney Coastal	892000185E	\$		2.6						2.6	\$
B1000	Kinney Coastal	892000185A	\$		6.7						6.7	\$
B1002	Kinney Coastal	892000185C	\$		42.1						42.1	\$
B1004	Kinney Coastal	0640446940	\$		0.2						0.2	\$
B1005	Kinney Coastal	0640447690	\$		1.1						1.1	\$
B1001	Kinney Coastal	892000185B	\$		6.9						6.9	\$
B0500	Garland (Em-Tn-Md)	892000174A	\$		242.3						242.3	\$
B0900	Harriman	064043979A	\$		4.9						4.9	\$

Table of Wyoming Crude Oil Packages and Properties Offered for Bid

Big Horn Basin -- Asphaltic Sour Crude

Line Code	Unit or Field Name	Federal Lease Agre. No.	Calc for MAB for all prop.	Federal Avg Royalty 6-mo. bbls/day	10-97 to 3.98 avg	Bidders					High Bid Over (Under) MAB	High Bid Over (Under) MAB	Accepted High bid times Daily Royl Bbls	6-month revenue gain using bid diff over MAB	
						MAB	Cenex	EOTT	Trans Conoco	Canada	Scurlock				
B1800	Sage Creek	8920005340	\$ X-4	1.2	X-4	X-4						X-4	X-4	12	\$ X-4
B1801	Sage Creek	049057045A	\$ X-5	1.0	X-5	X-5						X-5	X-5	10	\$ X-5
B1201	Little Polecat	0490492700	\$	0.6								X-4	X-5	06	\$
			\$		1,781.8									1,736.2	\$
			\$											97%	